What is claimed is:

1. A wheel bearing device comprising:

an outer member formed with double-row outer races on an inner periphery thereof;

an inner member formed with double-row inner races on an outer periphery thereof, the inner member including a wheel hub with a flange for attachment of a wheel and a fitting member fitted to one of an inner periphery or an outer periphery of the wheel hub, one of the wheel hub and the fitting member that is located inside including a plastically deformed portion radially expanded by plastic deformation to be coupled with the other one of the wheel hub and the fitting member that is located outside and an adjacent part adjoining the plastically deformed portion with a different inside diameter than that of the plastically deformed portion;

double-row rolling elements interposed between the outer races and the inner races; and

stress alleviating means for mitigating stress concentration at an interface part between the plastically deformed portion and the adjacent part of the one that is located inside.

2. The wheel bearing device according to claim 1,

wherein the stress alleviating means is a specified ratio of an inside diameter Φd2 of the adjacent part to an inside diameter Φd1 of the plastically deformed portion after the plastic deformation, the ratio being 1.110 or less.

3. The wheel bearing device according to claim 2, wherein the Φd2/Φd1 ratio is more than 1.

4. The wheel bearing device according to any one of claims 1 to 3, wherein the fitting member is an outer joint member of a constant velocity joint, the double-row inner races being formed on an outer periphery of the wheel hub and on an outer periphery of the outer joint member, respectively.

5. The wheel bearing device according to any one of claims 1 to 3, wherein the fitting member is an inner ring fitted to an outer periphery of the wheel hub.

6. The wheel bearing device according to claim 5, wherein the double-row inner races are formed on an outer periphery of the wheel hub and on an outer periphery of the inner ring, respectively.

7. The wheel bearing device according to claim 5, wherein the double-row inner races are formed on respective outer peripheries of two inner rings fitted to the outer periphery of the wheel hub.